

### **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A block copolymer comprising a ~~vinyl aromatic-hydrocarbon~~ styrene and a conjugated diene having a weight ratio of 60/40 to 90/10, wherein the number average molecular weight of said block copolymer, measured by gel permeation chromatography (GPC), is 30,000 to 500,000,

wherein ~~vinyl aromatic-hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have a block rate of from 10 to 90% by weight, said block rate being equal to the weight of ~~vinyl aromatic-hydrocarbons~~ styrenes having an average polymerization degree of 30 or more / the weight of the total amount of ~~vinyl aromatic-hydrocarbons~~ styrenes in the block copolymer X 100,

wherein the ~~vinyl aromatic-hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have a peak molecular weight within the molecular weight range of 5,000 to 30,000 as measured by gel permeation chromatography (GPC), and

wherein 40 to 80% by weight of the ~~vinyl aromatic-hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have a molecular weight of 35,000 or less as measured by gel permeation chromatography (GPC).

2. (Currently Amended) The block copolymer according to claim 1, wherein the ~~vinyl aromatic-hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have peak molecular weights as measured by gel permeation

chromatography (GPC) within the molecular weight range of 5,000 to 30,000 and within the molecular weight range of 35,000 to 150,000.

3. (Currently Amended) A block copolymer composition which comprises:  
10 to 90 parts by weight of a block copolymer according to claim 1 or 2  
(component 1) having a weight ratio of a ~~vinyl-aromatic-hydrocarbon~~ styrene and a conjugated diene of from 70/30 to 90/10, wherein the ~~vinyl-aromatic-hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have peak molecular weights within the molecular weight range of 5,000 to 30,000 as measured by gel permeation chromatography (GPC), and within the molecular weight range of 35,000 to 150,000 as measured by gel permeation chromatography (GPC), and  
90 to 10 parts by weight of a block copolymer according to claim 1 or 2  
(component 2) having a weight ratio of a ~~vinyl-aromatic-hydrocarbon~~ styrene and a conjugated diene of from 60/40 to 85/15, wherein the ~~vinyl-aromatic-hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have peak molecular weights within the molecular weight range of 5,000 to 30,000 as measured by gel permeation chromatography (GPC), and within the molecular weight range of 35,000 to 150,000 as measured by gel permeation chromatography (GPC),  
wherein the total amount of component 1 and component 2 is 100 parts by weight, and component 1 has a ~~vinyl-aromatic-hydrocarbon~~ styrene content larger than that of component 2 by at least 3% by weight.

4. (Currently Amended) A block copolymer composition which comprises:

10 to 90 parts by weight of a block copolymer according to claim 1 or 2 (component 1) having a weight ratio of a ~~vinyl aromatic hydrocarbon~~ styrene and a conjugated diene of from 70/30 to 90/10, wherein the ~~vinyl aromatic hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have peak molecular weights within the molecular weight range of 5,000 to 30,000 as measured by gel permeation chromatography (GPC), and within the molecular weight range of 35,000 to 150,000 as measured by gel permeation chromatography (GPC); and

90 to 10 parts by weight of a block copolymer according to claim 1 or 2 (component 3) having a weight ratio of a ~~vinyl aromatic hydrocarbon~~ styrene and a conjugated diene of from 60/40 to 85/15, wherein the ~~vinyl aromatic hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have a peak molecular weight within the molecular weight range of 5,000 to 30,000 as measured by gel permeation chromatography (GPC),

wherein the total amount of component 1 and component 3 is 100 parts by weight, and component 1 has a ~~vinyl aromatic hydrocarbon~~ styrene content larger than that of component 3 by at least 3% by weight.

5. (Currently Amended) A block copolymer composition which comprises:

10 to 90 parts by weight of a block copolymer according to claim 1 or 2 (component 4) having a weight ratio of a ~~vinyl aromatic hydrocarbon~~ styrene and a conjugated diene of from 70/30 to 90/10, wherein the ~~vinyl aromatic hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have a peak molecular

weight within the molecular weight range of 5,000 to 30,000 as measured by gel permeation chromatography (GPC), and

90 to 10 parts by weight of a block copolymer according to claim 1 or 2 (component 2) having a weight ratio of a ~~vinyl aromatic hydrocarbon~~ styrene and a conjugated diene of from 60/40 to 85/15, wherein the ~~vinyl aromatic hydrocarbons~~ styrenes having an average polymerization degree of 30 or more have peak molecular weights within the molecular weight range of 5,000 to 30,000 as measured by gel permeation chromatography (GPC), and within the molecular weight range of 35,000 to 150,000 as measured by gel permeation chromatography (GPC),

wherein the total amount of component 4 and component 2 is 100 parts by weight, and component 4 has a ~~vinyl aromatic hydrocarbon~~ styrene content larger than that of component 2 by at least 3% by weight.

6. (Currently Amended) The block copolymer according to claim 1 or 2, having a content of short-chain ~~vinyl aromatic hydrocarbon~~ styrene polymer moieties with 1 to 3 ~~vinyl aromatic hydrocarbon~~ styrene monomer units of from 1 to 25% by weight based on the total amount of the ~~vinyl aromatic hydrocarbons~~ styrenes constituting the block copolymer.

7. (Previously Presented) The block copolymer according to claim 1 or 2, wherein the conjugated diene constituting the block copolymer is butadiene and isoprene, and the weight ratio of butadiene and isoprene in the block copolymer is within the range of 3/97 to 90/10.

8. (Currently Amended) The block copolymer according to claim 1 or 2, wherein at least one polymer block selected from the group consisting of (i) a

copolymer block comprising isoprene and 1,3-butadiene, (ii) a copolymer block comprising isoprene and a ~~vinyl-aromatic hydrocarbon~~ styrene and (iii) a copolymer block comprising isoprene, 1,3-butadiene and a ~~vinyl-aromatic hydrocarbon~~ styrene is incorporated into the block copolymer.

9. (Original) A hydrogenated block copolymer obtained by hydrogenating the block copolymer according to claim 1 or claim 2.

10. (Original) The hydrogenated block copolymer according to claim 9, which has a crystallization peak in a temperature region of 20°C or higher, in a differential scanning calorimetry (DSC) chart.

11. (Currently Amended) A block copolymer composition comprising:  
component (A) which is a block copolymer according to claim 1 or 2 or a hydrogenated product thereof; and  
component (B) which is a ~~vinyl-aromatic hydrocarbon~~ styrene polymer;  
wherein the weight ratio of component (A) and component (B) is from 99.9/0.1 to 20/80.

12. (Currently Amended) The block copolymer composition according to claim 11, wherein the ~~vinyl-aromatic hydrocarbon~~ styrene polymer of component (B) is at least one member selected from the group consisting of the following a) to c):

- a) styrene polymers,
- b) aliphatic unsaturated carboxylic acid ester-styrene copolymers, and
- c) rubber-modified styrene polymers.

13. (Previously Presented) The block copolymer composition according to claim 11, which contains at least one lubricant selected from the group consisting of

fatty acid amides, paraffins, hydrocarbon resins, and fatty acids in an amount of from 0.01 to 5 parts by weight per 100 parts by weight of the block copolymer or a hydrogenated product thereof.

14. (Previously Presented) The block copolymer composition according to claim 11, which contains at least one stabilizer selected from the group consisting of 2-[1-(2-hydroxy-3,5-di-*t*-pentylphenyl) ethyl]-4,6-di-*t*-pentylphenyl acrylate, 2-*t*-butyl-6-(3-*t*-butyl-2-hydroxy-5-methylbenzyl)-4-methylphenyl acrylate and 2,4-bis [(octylthio)methyl]-*o*-cresol in an amount of from 0.05 to 3 parts by weight per 100 parts by weight of the block copolymer or a hydrogenated product thereof.

15. (Previously Presented) The block copolymer composition according to claim 11, which contains at least one ultraviolet absorber or light stabilizer selected from the group consisting of benzophenone-based ultraviolet absorbers, benzotriazole-based ultraviolet absorbers and hindered amine-based light stabilizers in an amount of from 0.05 to 3 parts by weight per 100 parts by weight of the block copolymer or a hydrogenated product thereof.

16. (Previously Presented) A sheet/film comprising the block copolymer or a hydrogenated product thereof according to claim 1.

17. (Previously Presented) A heat shrinkable film obtained by stretching a film comprising the block copolymer or a hydrogenated product thereof according to claim 1, wherein the film has a heat shrinkage ratio at 65°C in the stretching direction of from 5 to 60%, and a tensile elastic modulus in the stretching direction of 7,000 to 30,000 Kg/cm<sup>2</sup>.

18. (Previously Presented) A heat shrinkable multilayer film comprising as at least one layer of the multilayer film, a layer obtained by stretching a film comprising the block copolymer or a hydrogenated product thereof according to claim 1, wherein the heat shrinkage ratio at 80°C in the stretching direction is from 10 to 80%.

19. (Previously Presented) A heat shrinkable multilayer film comprising as at least one layer of the multilayer film, a layer comprising the block copolymer or a hydrogenated product thereof according to claim 1, which has at least two peak molecular weights within the range of 40,000 to 300,000, in the gel permeation chromatography (GPC) measurement, and moreover, has at least one  $\tan\delta$  peak temperature within the temperature range of 90 to 125°C, in the dynamic viscoelasticity measurement.

20. (Original) The heat shrinkable multilayer film according to claim 18 or 19, having a heat shrinkage ratio at 65°C in a stretching direction from 5 to 60%, and a tensile elastic modulus in a stretching direction of 7,000 to 30,000 Kg/cm<sup>2</sup>.

21. (Previously Presented) A sheet/film comprising the block copolymer composition according to claim 11.

22. (Previously Presented) A heat shrinkable film obtained by stretching a film comprising the block copolymer composition according to claim 11, wherein the film has a heat shrinkage ratio at 65°C in the stretching direction of from 5 to 60%, and a tensile elastic modulus in the stretching direction of 7,000 to 30,000 Kg/cm<sup>2</sup>.

23. (Previously Presented) A heat shrinkable multilayer film comprising as at least one layer of the multilayer film, a layer obtained by stretching a film comprising

the block copolymer composition according to claim 11, wherein the heat shrinkage ratio at 80°C in the stretching direction is from 10 to 80%.

24. (Previously Presented) A heat shrinkable multilayer film comprising as at least one layer of the multilayer film, a layer comprising the block copolymer composition according to claim 11, which has at least two number average peak molecular weights within the range of 40,000 to 300,000, in the gel permeation chromatography (GPC) measurement, and moreover, has at least one  $\tan\delta$  peak temperature within the temperature range of 90 to 125°C, in the dynamic viscoelasticity measurement.

25. (Previously Presented) The heat shrinkable multilayer film according to claim 23 or 24, having a heat shrinkage ratio at 65°C in a stretching direction of from 5 to 60%, and a tensile elastic modulus in a stretching direction of 7,000 to 30,000 Kg/cm<sup>2</sup>.